SWAN

WM-1500 THRULINE WATTMETER

SPECIFICATIONS

Frequency:	2-30 Mhz, up to 50 Mhz at slightly reduced accuracy
Design Impedance:	50 Ohm
Power Ranges:	

1. 0 - 5 watts
2. 0 - 50 watts
3. 0 - 500 watts
4. 0 - 1500 watts

(Above ranges forward and reverse)

Meter:	Reads forward or reverse power in watts
Accuracy:	Better than ± 10% of full scale
Directivity:	Better than 30db
Insertion VSWR:	1.05:1 or less
Size:	6-1/2" high, 4-3/4" wide, 6-3/4" deep, including mounting feet, knobs and RF connector.
Weight:	2-3/4 pounds

Front panel controls are provided for selection of range and forward or reverse power. The rear panel has two SO-239 connectors, one for input and one for output. These can be reversed without changing the power ranges, but the function of the direction switch will be reversed.

DESCRIPTION

The WM-1500 will work properly in practically any location. Preferably choose a location that will allow you to reach the switch knobs easily.

The unit can be used to:

1. Monitor transmitter power output.
2. Measure reflected power from which VSWR can be determined.
3. Indicate transmitter tuning and loading into dummy load or antenna.
4. Indicate matching between low power transmitter and a high power amplifier.
5. Show effects of feed line and antenna adjustments for optimum matching.

SWAN WM-1500 THRULINE WATTMETER SPECIFICATIONS

UNPACKING & HANDLING

Remove the WM-1500 from its shipping carton. Inspect it for evidence of physical damage. If there is damage, be sure to keep the shipping material for the inspection of insurance adjuster. Fill out the warranty card and mail it.

LOCATING

Extra short rubber feet have been provided so you can properly adjust the WM-1500 for most convenient reading of the meter. The unit comes with taller rubber feet in the front. This tilts the meter up for locations below eye level. The position of these can be reversed to tilt the unit down when mounted above eye level. When mounting at eye level, the taller rubber feet can be replaced by the two additional short feet supplied with the unit, allowing the meter to be vertical with no tilt. The rubber feet which are held by sheetmetal screws are easily changed with only a screwdriver and without removing the cover from the instrument.

CONNECTING

The most desirable location of the WM-1500 will vary depending on the application. A typical location will be between the transmitter (transceiver or power amplifier) and the feedline to the antenna. In the case of transceivers, the received signal will not be affected.

On the rear panel are two SO-239 RF connectors, one marked INPUT (for connection to the transmitter) and one marked OUTPUT (for connection to the feedline or load). When using 50 ohm coax the length is not critical to the proper operation of the wattmeter. If the cables are connected as indicated, the FWD.-REV. switch will function as labeled. If for convenience it is desired to use the OUTPUT connection for the transmitter and the INPUT connection for the antenna, it is only necessary to remember to read the FWD.-REV. function switch opposite to the way it is marked. Reversing the connections does not change the power level switch or in any other way change the accurate functioning of the WM-1500.

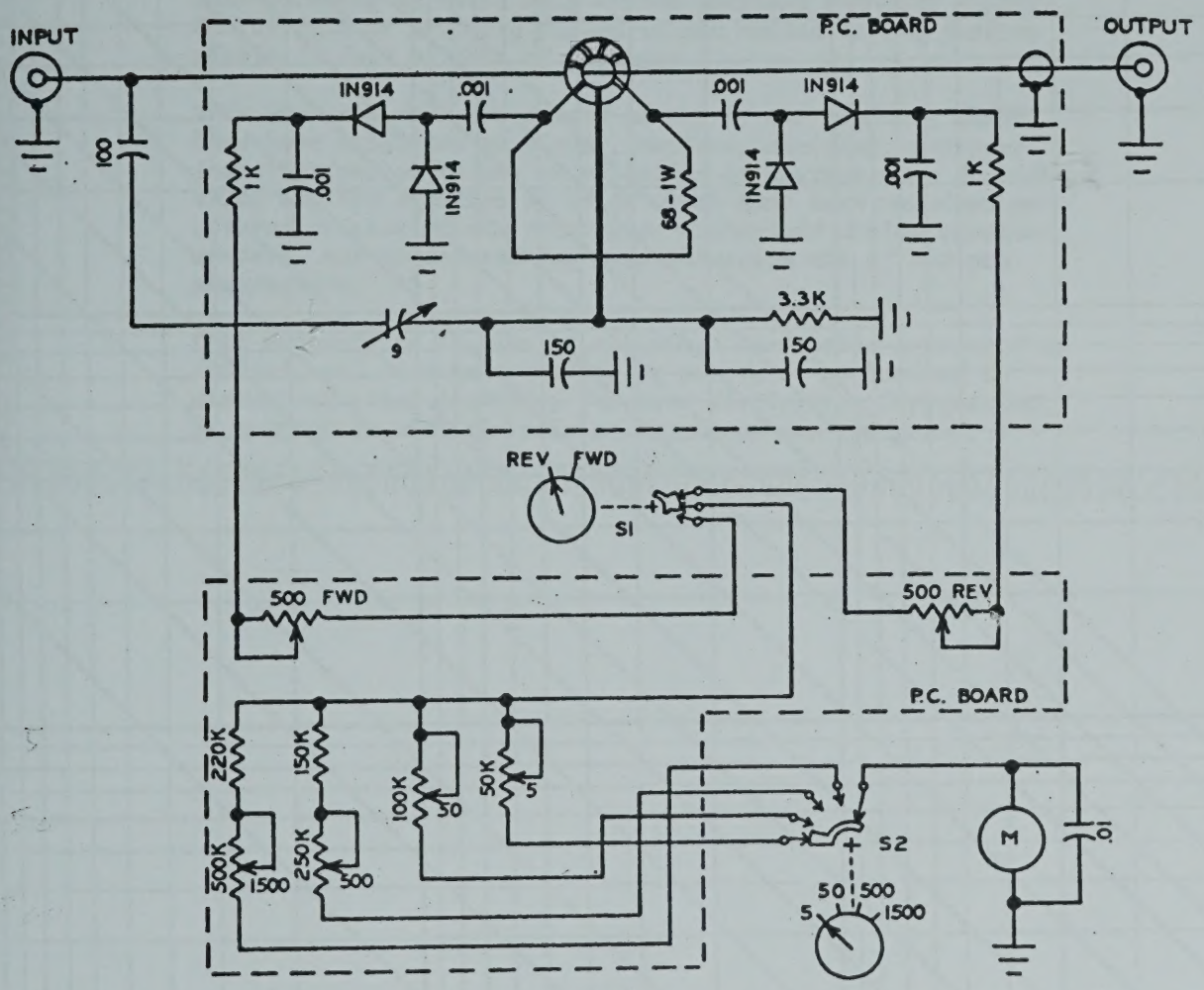
PRECAUTIONS

The meter used in the WM-1500 is quite sensitive (50 ua). If you do not know the power level, always switch to the 1500 watt position before transmitting any RF thru the WM-1500 wattmeter. After determining the power level, the proper range can then be selected. When using the higher ranges and switching to REV. you can switch to the 5 watt range if the reflected reading is less than 5 watts regardless of the level of the forward power. However, be sure to switch back to the range that was being used before again switching to FWD. or damage to the sensitive meter may occur.

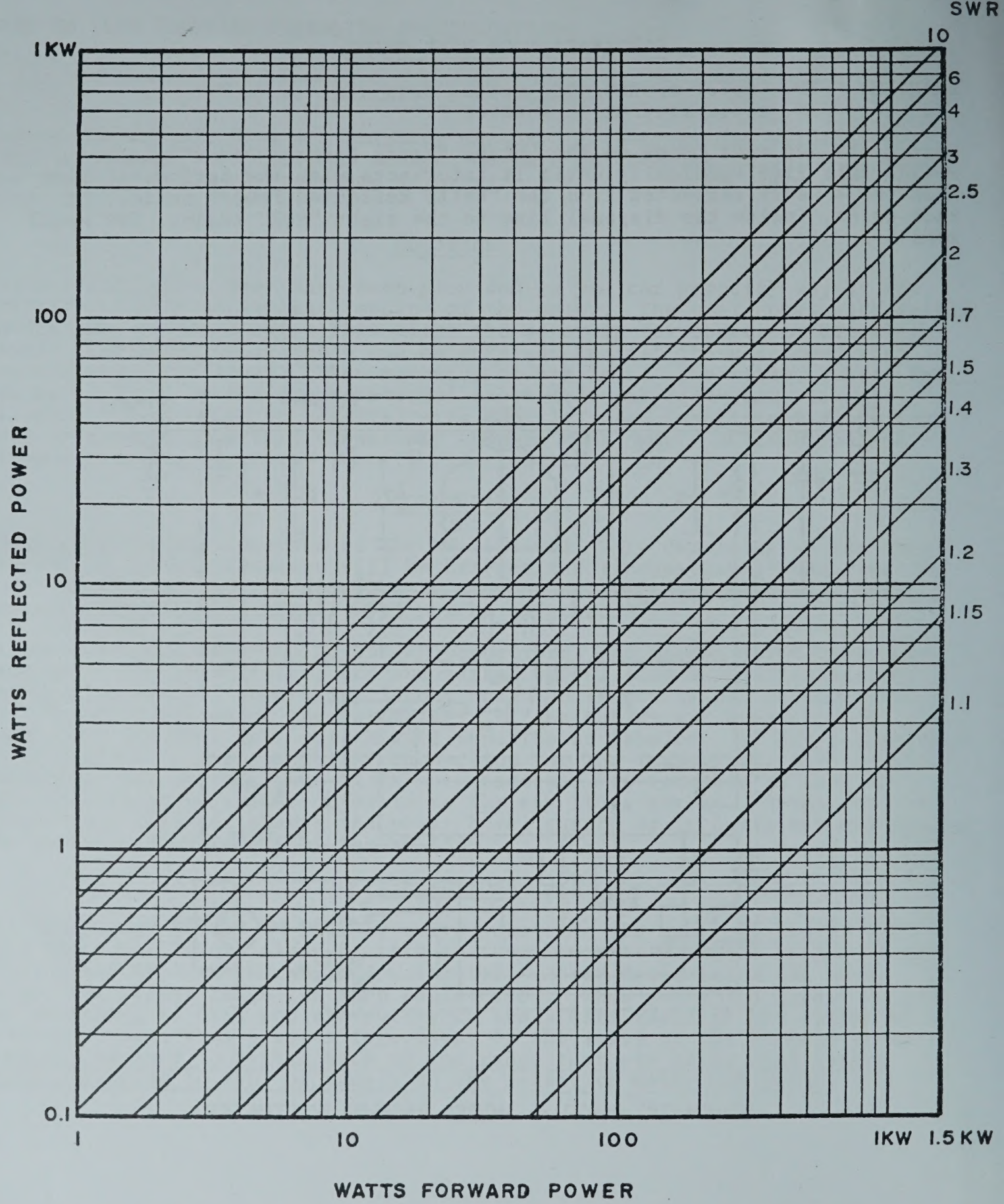
EXPLANATION OF VSWR CHART

EXAMPLE: FWD. meter reading 100 watts
REV. meter reading 4 watts

Locate the 100 watt point on the bottom "Watts Forward Power" scale. Follow this line vertically until it intersects with the horizontal line from the 4 watts reflected from the "Watts Reflected Power" scale. At this point, follow the diagonal line to the right "SWR" scale. SWR would read 1.5.



SCHEMATIC DIAGRAM - MODEL WM-1500 WATTMETER


SWR
10
6
4
3
2.5
2
1.7
1.5
1.4
1.3
1.2
1.15
1.1
1KW
100
10
1
0.1
WATTS REFLECTED POWER
1
10
100
1KW 1.5KW
WATTS FORWARD POWER

WARRANTY POLICY

SWAN ELECTRONICS CORPORATION, warrants this equipment against defects in materials and workmanship, under normal service, for a period of one year from date of original purchase. This warranty is limited to repairing or replacing only the defective parts, provided the unit is delivered by the owner to the Swan Factory, intact, for examination, with all transportation charges prepaid within the warranty period, and provided that such examination discloses in our judgement that it is thus defective.

This warranty is valid only if the enclosed WARRANTY REGISTRATION CARD is properly filled in and mailed to the factory within 10 days of date of purchase.

This warranty does not extend to any of our products which have been subjected to misuse, neglect, accident, improper installation, or to use in violation of instructions furnished by us, nor extended to units which have been repaired or altered outside of our factory or authorized dealer service centers, nor to accessories used therewith not of our own manufacture.

This warranty is in lieu of all other warranties expressed or implied, and no representative or person is authorized to assume any other liability for Swan Electronics Corporation, in connection with the sale or repair of our equipment.

SWAN
ELECTRONICS
A subsidiary of Cubic Corporation
305 Airport Road • Oceanside, CA 92054 • Phone (714) 757-7525

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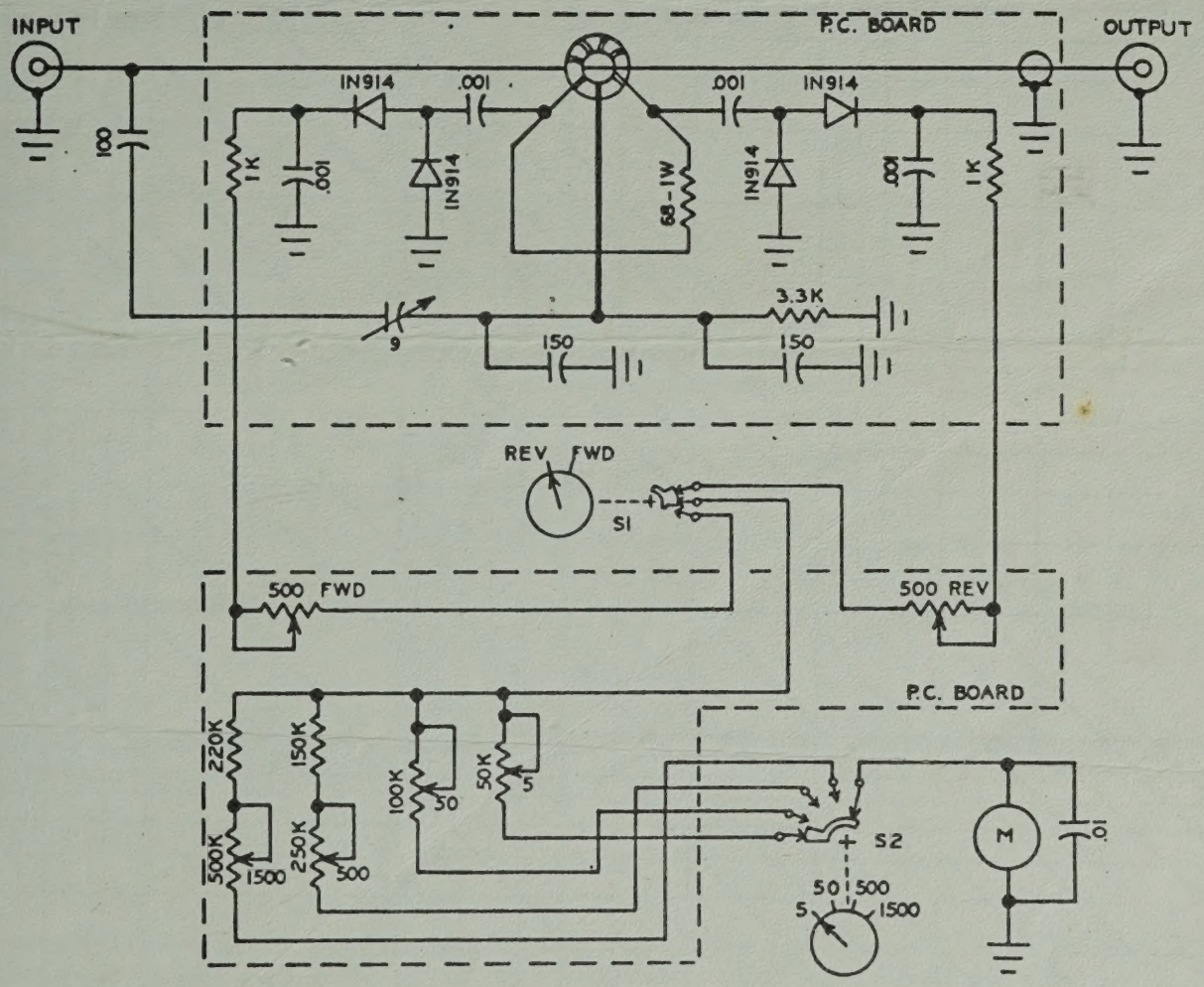

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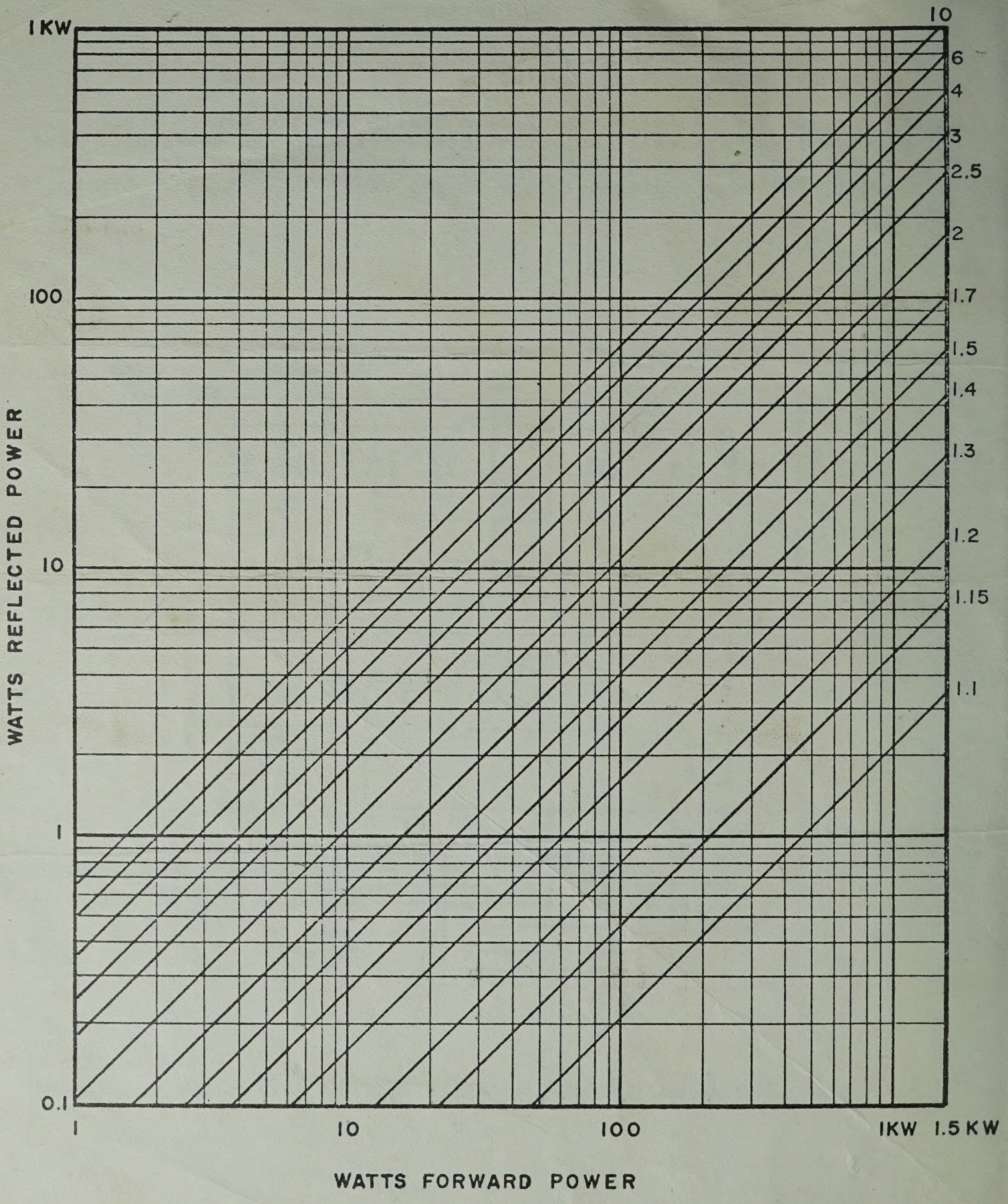
SWR
10
6
4
3
2.5
2
1.7
1.5
1.4
1.3
1.2
1.15
1.1
1KW
100
10
1
0.1
WATTS REFLECTED POWER
1
10
100
1KW
1.5KW
WATTS FORWARD POWER

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